

KEY MAP OF WASHINGTON SHOWING LOCATION OF PROJECT



UNITED STATES DEPARTMENT OF AGRICULTURE  
FOREST SERVICE - REGION SIX



COLVILLE NATIONAL FOREST

NEWPORT RANGER DISTRICT

DRAWINGS FOR PROPOSED

NINEBARK T.S.

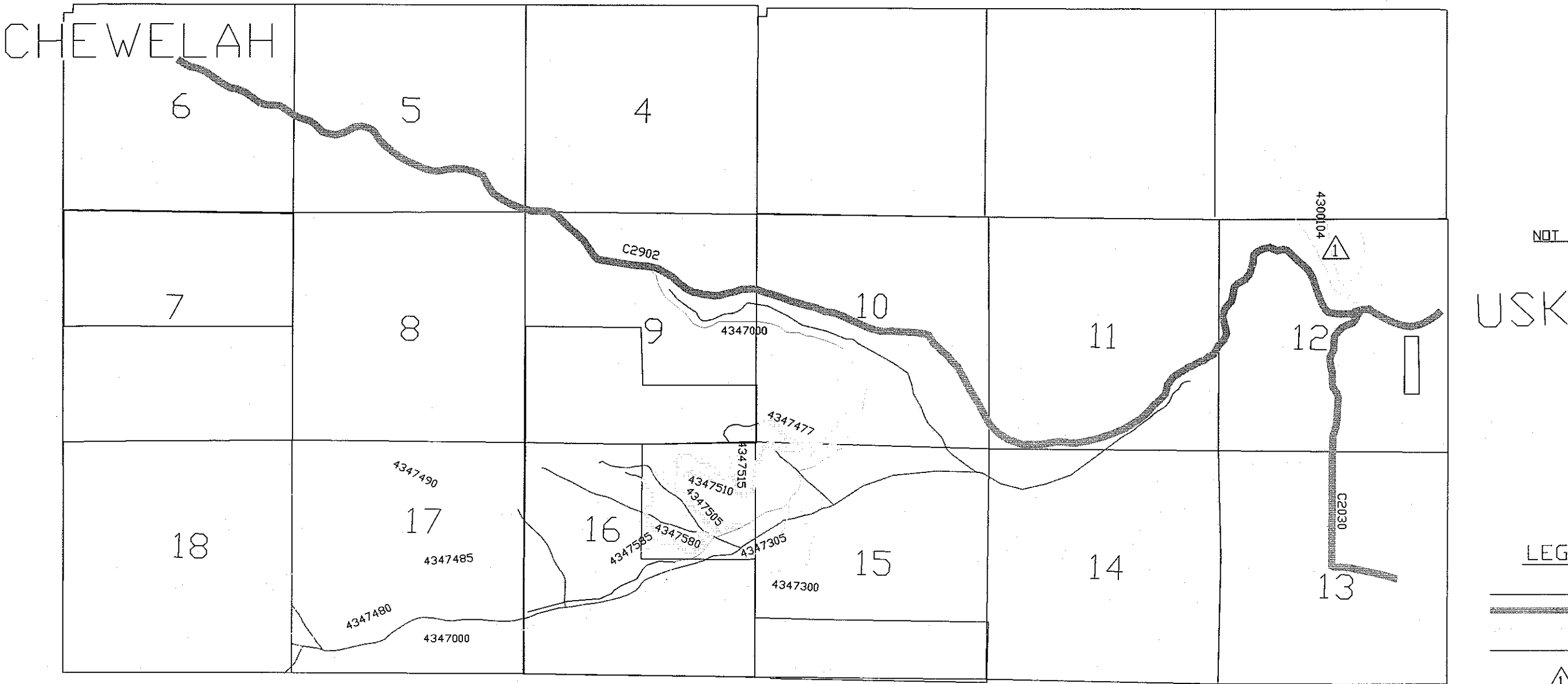
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ROAD NUMBER	LENGTH	RECONST CONST	SHEET NUMBER	DESIGN VEHICLE	CRITICAL VEHICLE
4347477	0.57	RECONST	9	LOGTRUCK	LOGTRUCK
4347505	1.98	RECONST	9	LOGTRUCK	LOGTRUCK
4347510	0.2	RECONST	9	LOGTRUCK	LOGTRUCK
4347580	0.8	RECONST	9	LOGTRUCK	LOGTRUCK

TOTAL CONSTRUCTION	___	MILES
TOTAL RECONSTRUCTION	3.55	MILES

PROJECT COORDINATOR:	
<u>Cathy Fallon</u>	<u>5/29/14</u>
NAME	DATE
PEER REVIEWER:	
<u>John S Kennedy</u>	<u>5-14-14</u>
NAME	DATE
TRANSPORTATION MANAGER:	
<u>Paul A. Jones</u>	<u>6/4/14</u>
NAME	DATE
RECOMMENDED BY:	
<u>[Signature]</u>	<u>5-29-14</u>
NAME	DATE
FOREST ENGINEER	
APPROVED BY:	
<u>Cayne Sears</u>	<u>29 May 2014</u>
NAME	DATE
DISTRICT RANGER	

NINEBARK T.S. VICINITY MAP  
T32N R42E



NOT TO SCALE

LEGEND

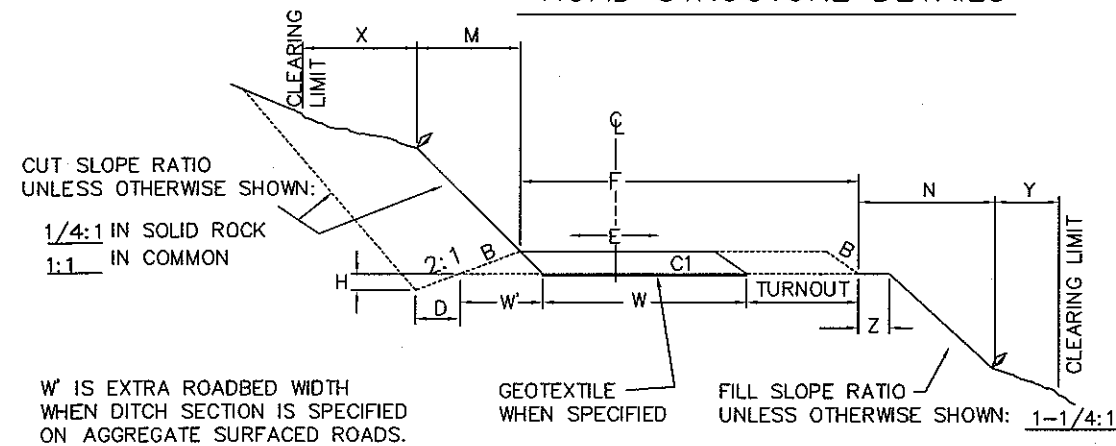
- EXIST. ROADS
- COUNTY
- RECONSTRUCTION
- CREEK
- PIT SOURCE
- WATER SOURCE

													SHEET 3	OF 10
ESTIMATE OF QUANTITIES														
Item Number	Description	Unit	4347477R 0.57mi	4347505R 1.98mi	4347510R 0.2mi	4347580R 0.8mi							Project Total	Remarks
15101	Mobilization	ls	All	All	All	All							All	
15219	Establishing clearing limits	mile	0.57	1.98	0.20	0.80							3.55	
20103	Clearing and grubbing, disposal of tops and limbs f.l, logs f, and stumps f.	mile	0.57	1.98	0.20	0.80							3.55	
20402	Roadway excavation, compaction method C finish method C.	mile	0.57	1.98	0.20	0.80							3.55	
20419	Drainage excavation - drainage ditch	ft	1495	700		895							3090	
20419A	Drainage excavation - lead out ditch	ft				60							60	
20420A	Drainage excavation, type Drain Dip	each	1	1	1	5							8	
20420B	Drainage excavation, type Catch Basin	each	1										1	
32232	Haul and place stockpiled aggregate, compaction method H	cy	8	54	8	40							110	
60201A	18 inch pipe culvert	ft		60	32								92	
62501	Seeding dry method	acre	1.80	6.20	0.63	2.50							11.13	
65002	Install Type 2 Gate	each		2									2	Gov't Furnished Gates. Purchaser Install Markers

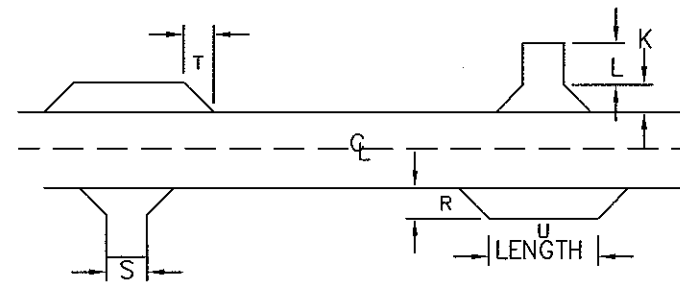
## TYPICAL ROADWAY SECTION

(NOT TO SCALE)

## ROAD STRUCTURE DETAILS



## TURNAROUND & TURNOUT SYMBOLS



## NOTES

1. CURVE WIDENING, WHEN SPECIFIED, SHALL BE ADDED TO INSIDE OF CURVE.
2. TAPER LENGTH ON CURVE WIDENING IS LOCATED IN THE CURVE DATA BOX ON THE PLAN SHEETS.
3. SEEDING AND/OR MULCHING AREA INCLUDES SECTIONS SHOWN ON TYPICALS AND ALL OTHER AREAS DISTURBED BY CONTRACTOR.
4. TURNOUTS AND CURVE WIDENING SHALL BE SURFACED TO SAME DEPTH AS THE TRAVELED WAY AND TO THE DIMENSIONS SPECIFIED IN THE PLANS.
5. CONSTRUCTION STAKES SHALL BE 0.3 in. THICK X 1.5 in. WIDE X 24 in. LONG, +/- 0.1in. THICKNESS AND THE TOP 2in. TO BE PAINTED RED. CLEARING FLAGGING SHALL BE GLO PINK. STAKES SHALL BE SET ON UPHILL SIDE OF CENTERLINE.
6. SLOUGH WIDENING "Z" SHALL BE 1ft. WHERE FILLS ARE 5ft. OR LESS AND 2ft. WHERE FILLS ARE GREATER THAN 5ft.
7. ALL DITCHES SHALL BE SLOPED TO DRAIN.
8. SEEDING IS NOT REQUIRED WHERE SLOPE RATIOS ARE 1/2:1 OR STEEPER.
9. ROADWAY FINISHING FOR ALL ROADS IS METHOD C PER FSSS 204.13
10. IN AREAS WHERE DD OR OSD FALL WITHIN A DESIGNATED AGGREGATE SPREAD, PLACE AGGREGATE AS SHOWN IN DRAINAGE DETAIL.

[illegible]

## FOOTNOTES

- 1/ OUTSLOPE ALL ROADS EXCEPT INSLOPE IN DITCHED AREAS AND CULVERT CATCH BASINS UNLESS OTHERWISE SHOWN ON PLANS.
- 2/ AT LOCATIONS SHOWN ON THE DRAWINGS.
- 3/ CONSTRUCT ADDITIONAL WIDTH IN ALL AREAS WHERE PLACEMENT OF AGGREGATE IS SHOWN ON THE PLANS
- 4/ CLEARING LIMITS SHALL BE ESTABLISHED FROM STAKE NOTES OR 13 FEET FROM CENTERLINE WHICHEVER IS GREATER.
- 5/ DEPTHS AS SHOWN IN THE PLANS

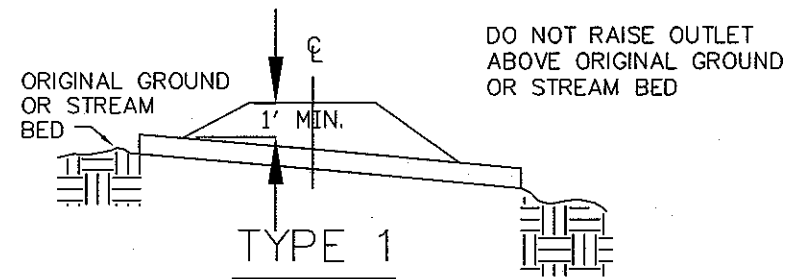
## ABBREVIATIONS

DD=DRAIN DIP  
OSD=OUTSLOPE DRAIN  
TOR=TURNOUT RIGHT  
TOL=TURNOUT LEFT  
TAR=TURNAROUND RIGHT  
TAL=TURNAROUND LEFT  
CWR=CURVE WIDENING  
RIGHT  
CWL=CURVE WIDENING  
LEFT  
LOD=LEADOUT DITCH  
——=GROUND  
— —=GRADE

# CULVERT DETAILS

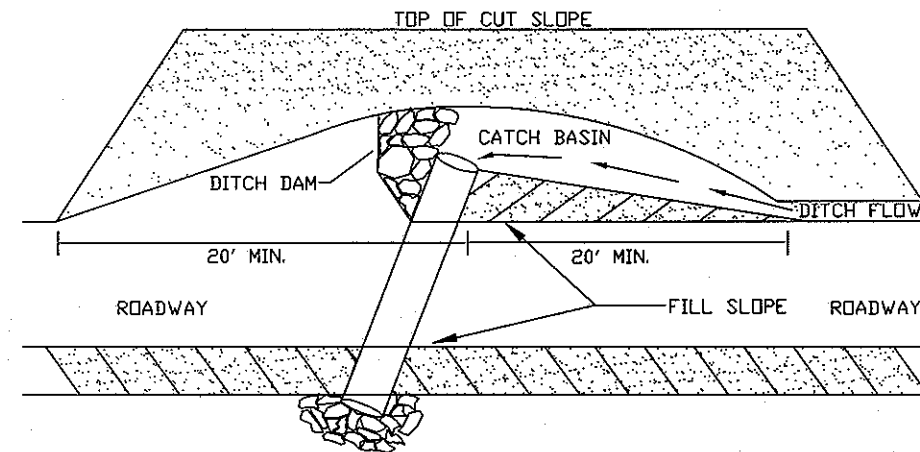
SHEET	OF
5	10

## CULVERT TYPES



## CATCH BASIN DETAIL AND INLET & OUTLET PROTECTION

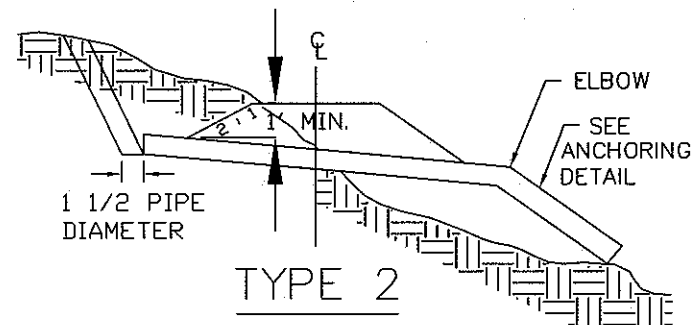
FOR ALL NEW TYPE 1, 2 & 3 CULVERT INSTALLATION



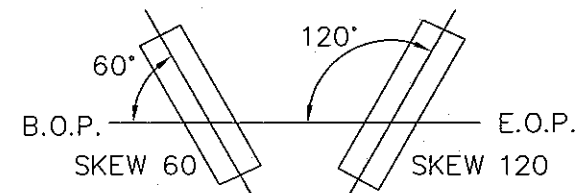
SLASH DISPOSAL METHOD (D) AS PER FSSS 203.05 PLACED ON ALL NEW CULVERTS WHERE CLEARING IS SPECIFIED.

OUTLET PROTECTION

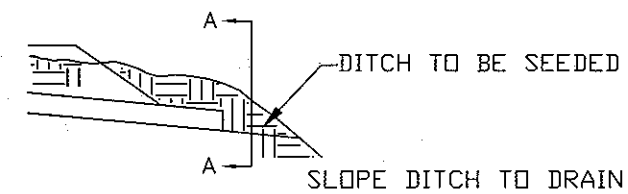
ROADBED



## SKIEW DIAGRAM

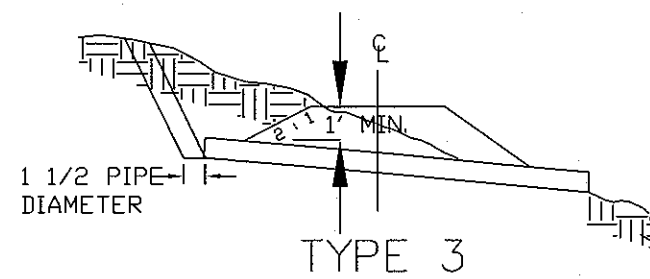
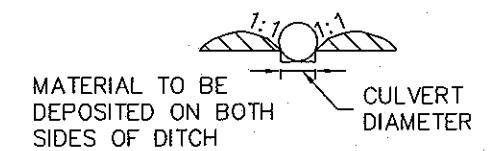


## LEADOUT DITCH

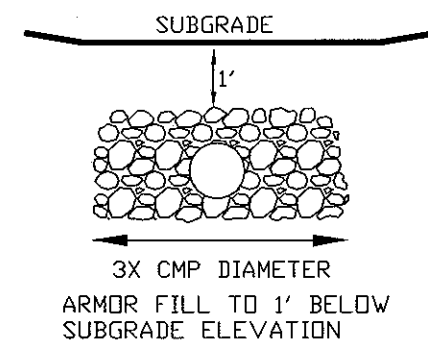


## LEADOUT DITCH

SECTION A-A

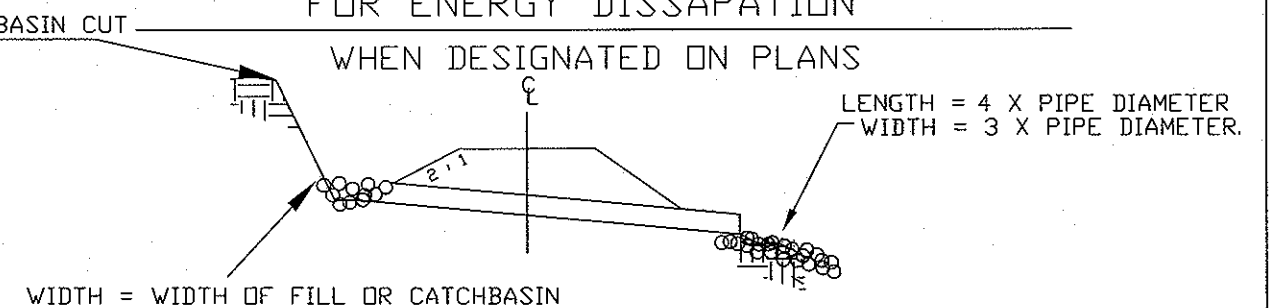


## ARMORING CULVERT FILL SLOPES



## RIPRAP CULVERT INLET & OUTLET FOR ENERGY DISSIPATION

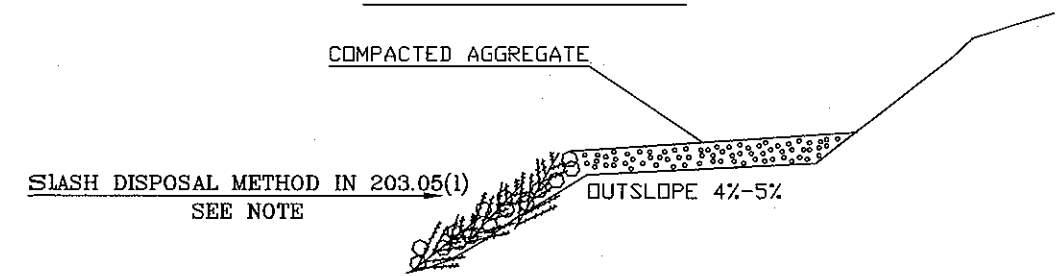
WHEN DESIGNATED ON PLANS



# DRAINAGE DETAILS

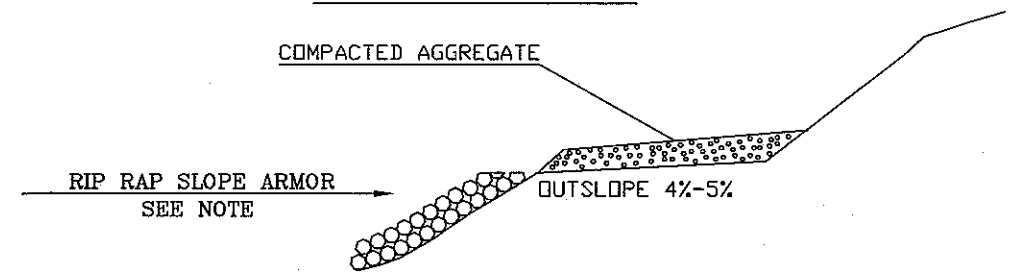
## OUTSLOPE DRAIN & DRAIN DIP

### SLOPE TREATMENT

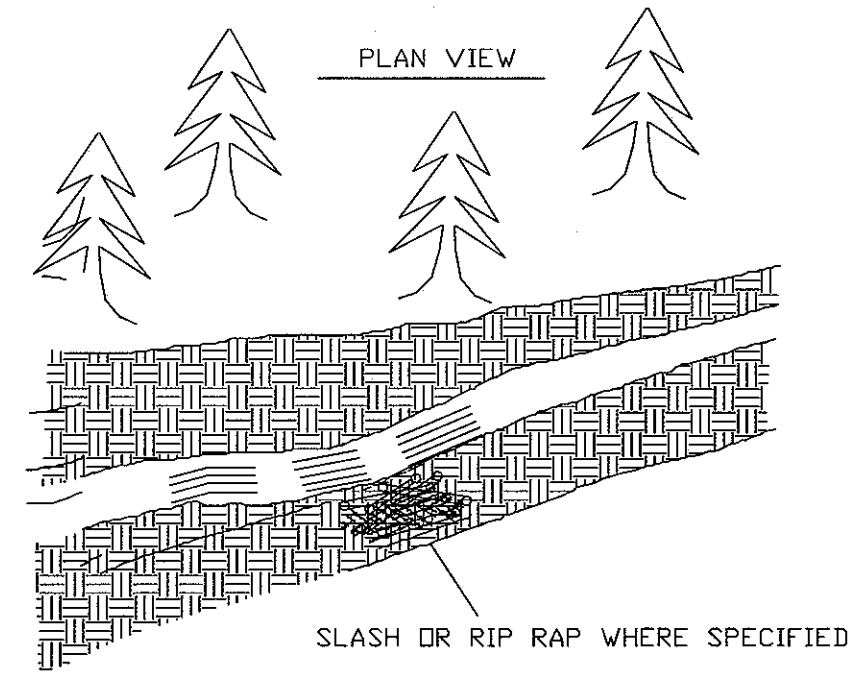


## OUTSLOPE DRAIN & DRAIN DIP

### SLOPE TREATMENT

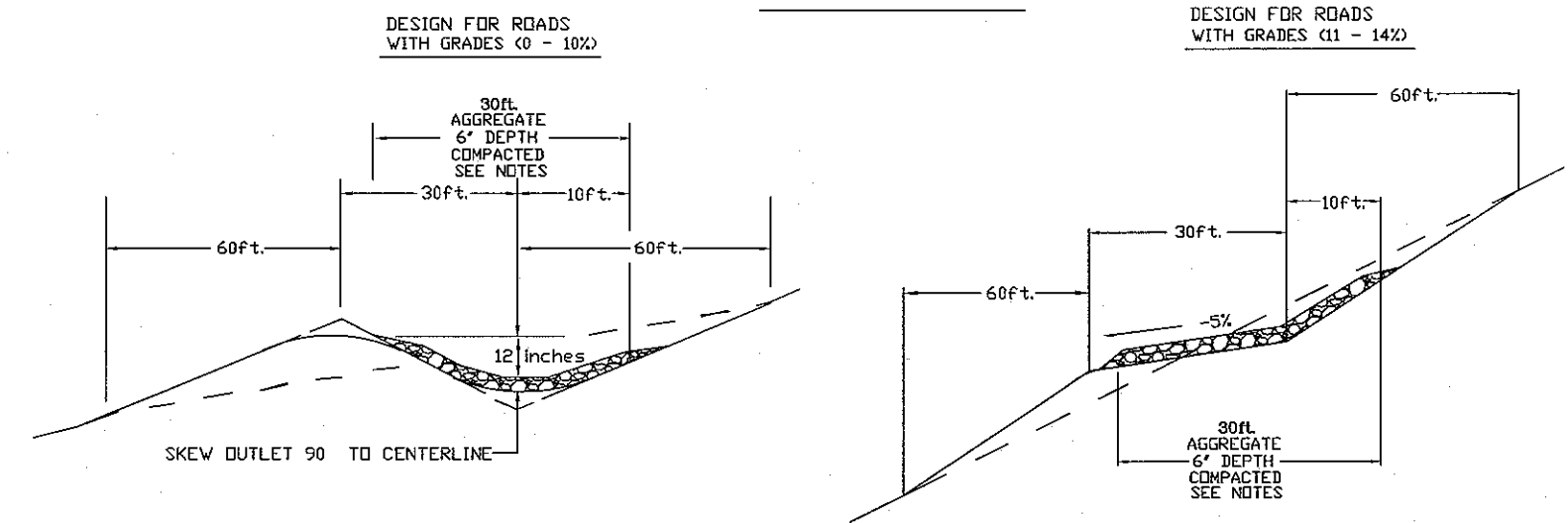


### PLAN VIEW

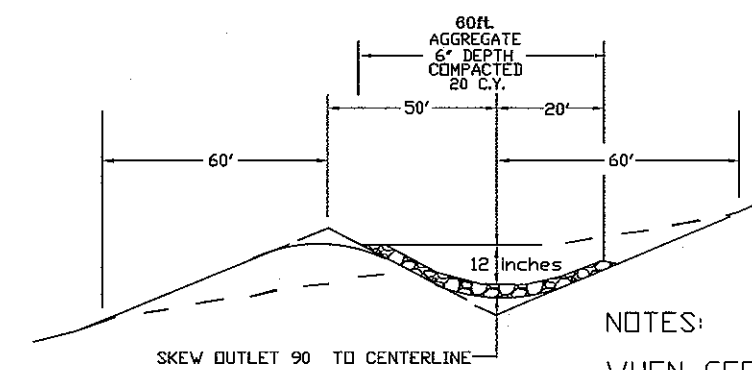


## DRAIN DIP DETAILS (DD)

### PROFILE VIEW



DESIGN FOR ROADS WHERE CRITICAL VEHICLE IS A LOWBOY WITH GRADES (0 - 7%)

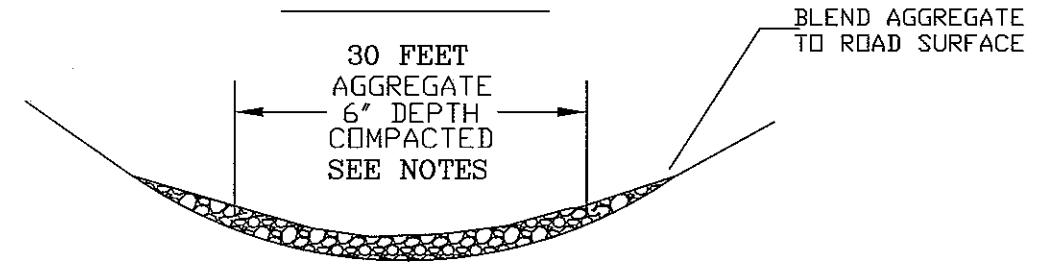


### NOTES:

- WHEN GEOTEXTILE IS SPECIFIED IN DRAIN DIPS OR OUT SLOPE DRAINS, SIZE SHALL BE 15'W X 30'L
- DO NOT INTERCEPT DITCH WATER WHERE DRAIN DIPS OR OUT SLOPE DRAINS ARE DESIGNATED IN DITCHED SECTIONS, UNLESS OTHERWISE SPECIFIED.
- SLASH SHALL BE PLACED ON FILL SLOPES TO A DEPTH OF 1' AT THE LOWEST POINT IN DRAIN DIP OR OUTSLOPED DRAIN, AND EXTEND 5' EACH WAY. THIS APPLYS TO ALL NEW AND RESHAPED DRAINS THAT ARE WITHIN ALL CLEARING LIMIT AREAS.
- PLACE RIP RAP ON FILL SLOPES OF DRAIN DIP OR OUTSLOPED DRAINS WHERE SPECIFIED, 1' DEEP, EXTENDING 4' EACHWAY OF LOWEST POINT.
- 12' ROADBEDS REQUIRE 8 C.Y. OF IN PLACE AGGREGATE
- 14' ROADBEDS REQUIRE 10 C.Y. OF IN PLACE AGGREGATE

## OUTSLOPE DRAIN DETAIL (OSD)

### PROFILE VIEW

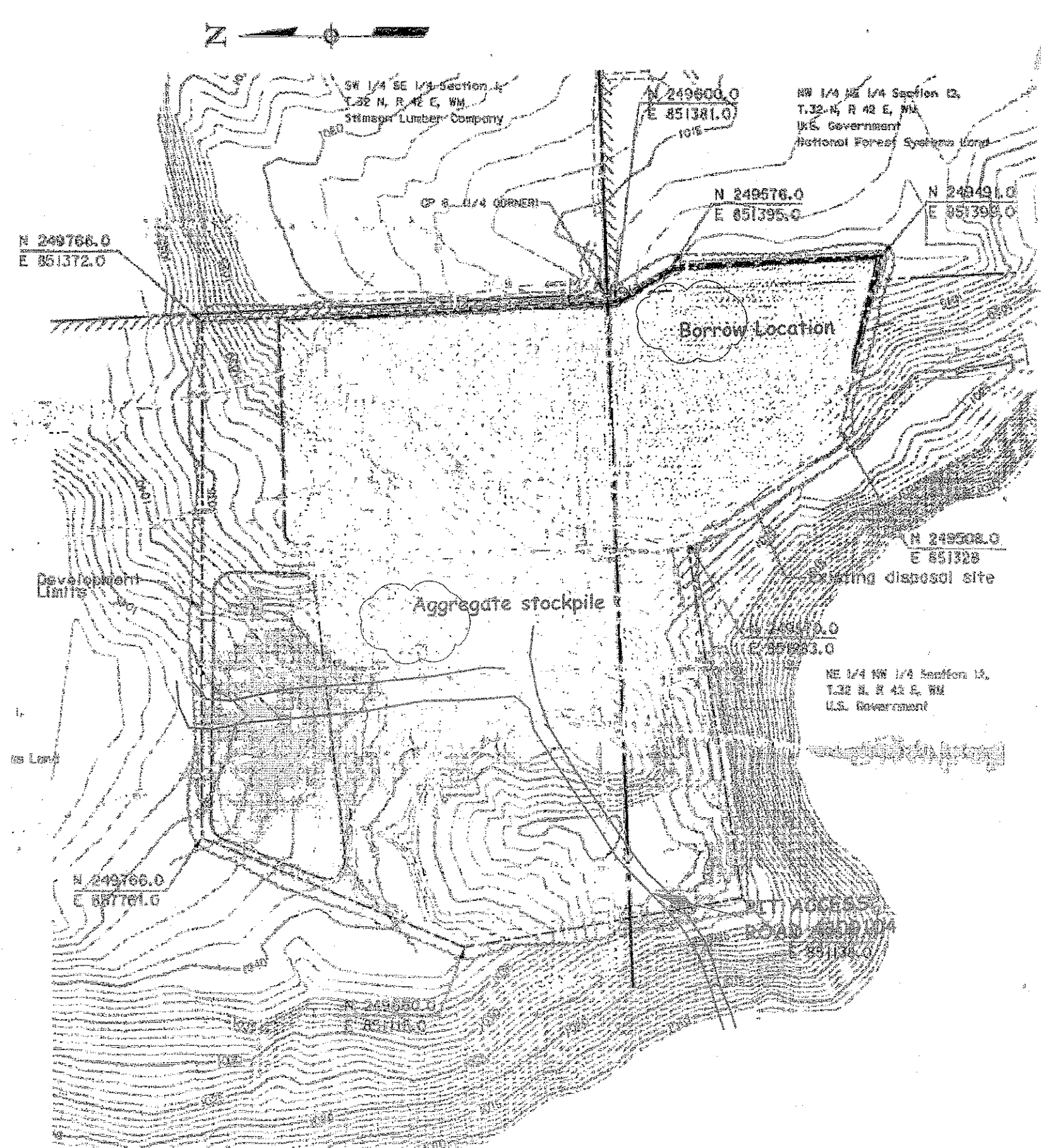


CULVERT LISTING

DESIGNED			AS BUILT			CORRUGATION & THICKNESS		INSTALLATION DETAILS				GA. - GAUGE AL. - ALUMINUM FE. - STEEL TF. - TO FIT  SLASH DISPOSAL METHOD (L) AS PER FSSS 203.05 SHALL BE PLACED ON ALL CULVERT INSTALLATIONS WHERE CLEARING IS SPECIFIED.	
STATION OR MILE POST	DIAMETER IN INCHES	LENGTH IN FEET	STATION	DIAMETER IN INCHES	LENGTH IN FEET	2 2/3" x 1/2" .064 FE (16 GA.)		TYPE	SKEW	COMPACTION METHOD	STAKING METHOD		REMARKS
Rd 4347505R													
15+35	18	28				X		1	TF	B	1		
27+55	18	32				X		1	TF	B	1		
Rd 4347510R													
4+100	18	32				X		1	TF	B	1		

# GLETTY PIT DEVELOPMENT PLAN

SHEET	OF
8	10



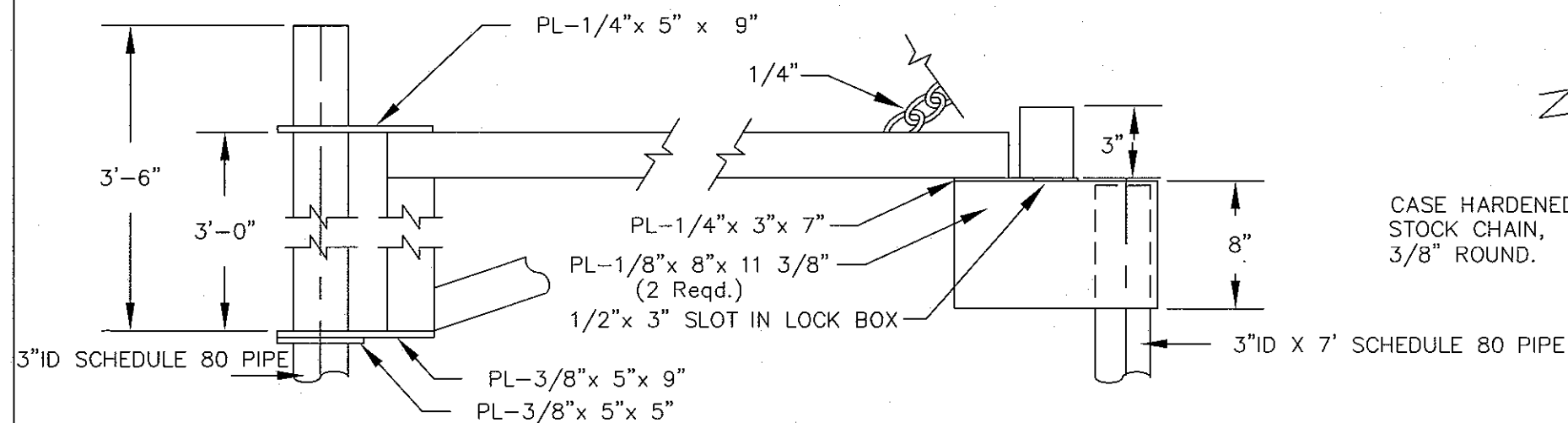
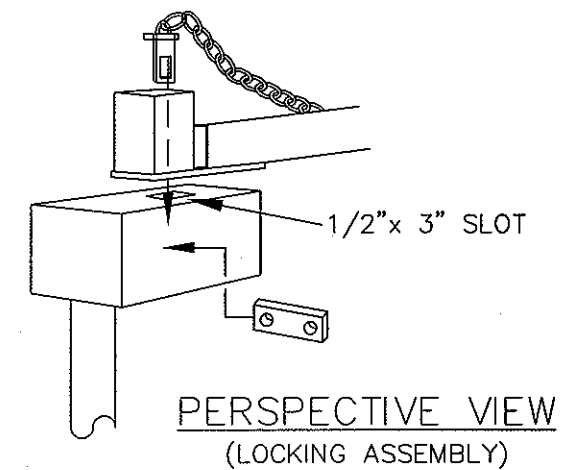
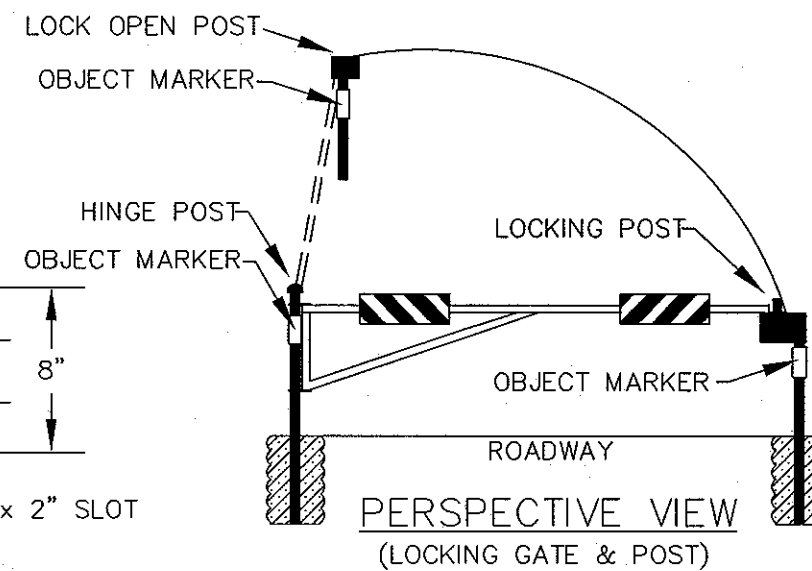
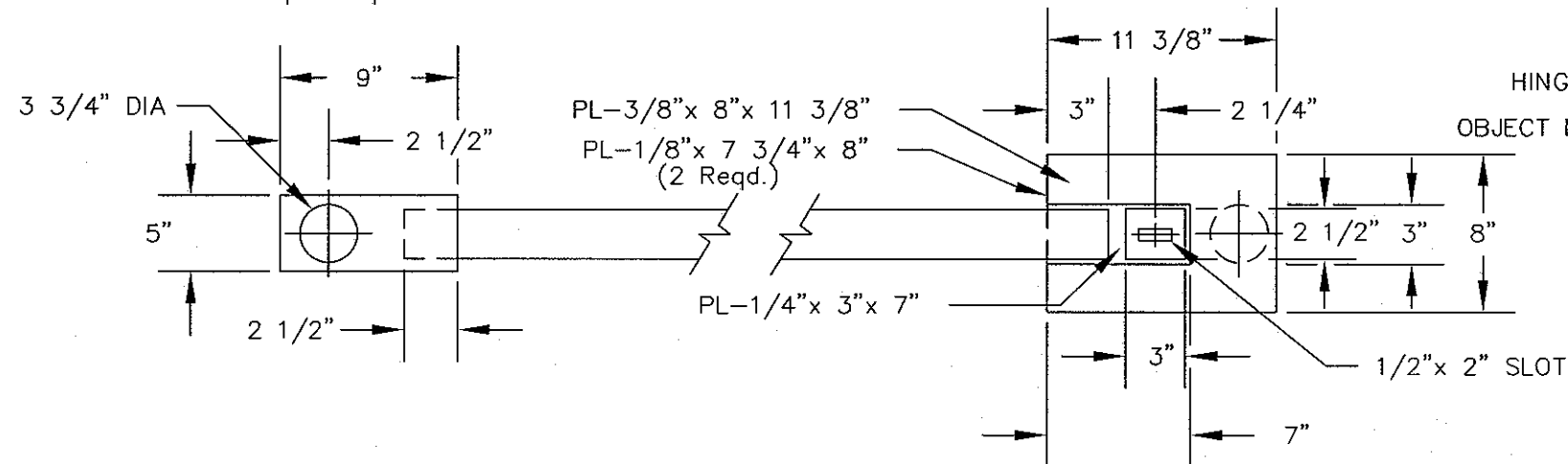
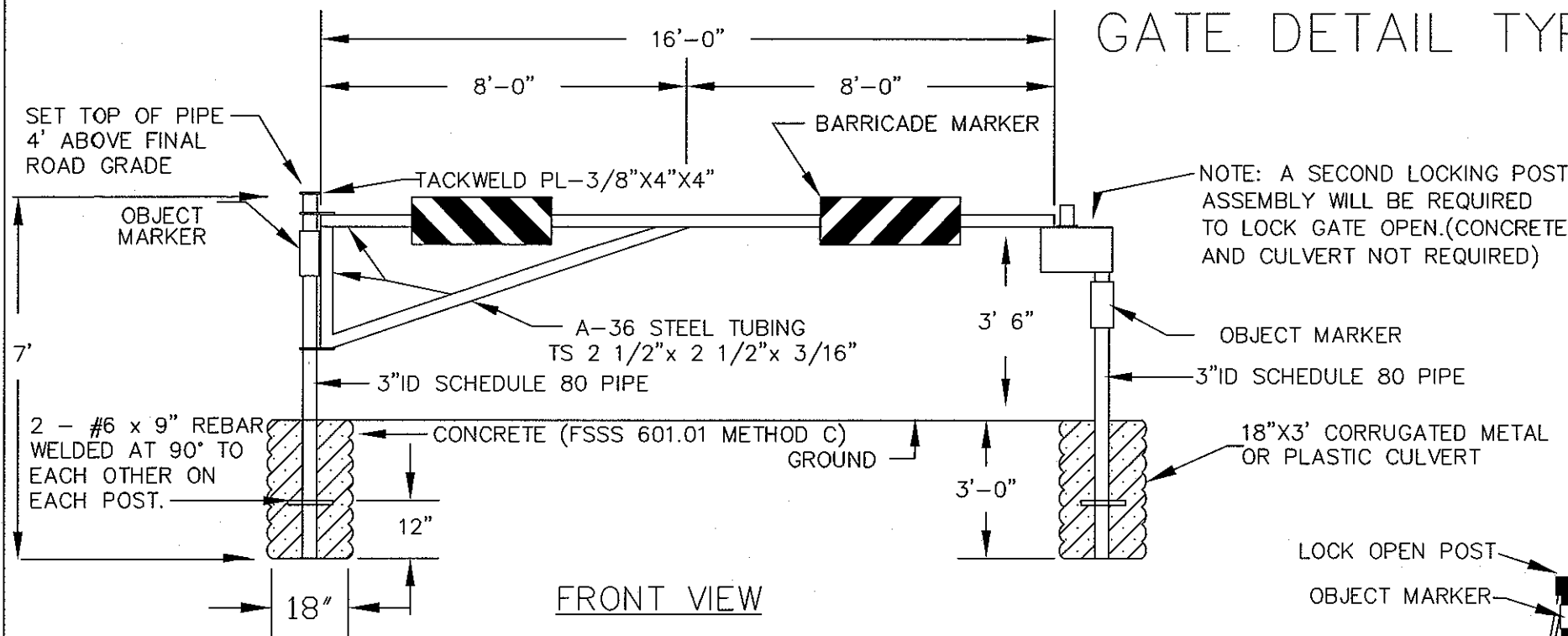
**NINEBARK T.S.  
GLETTY PIT**



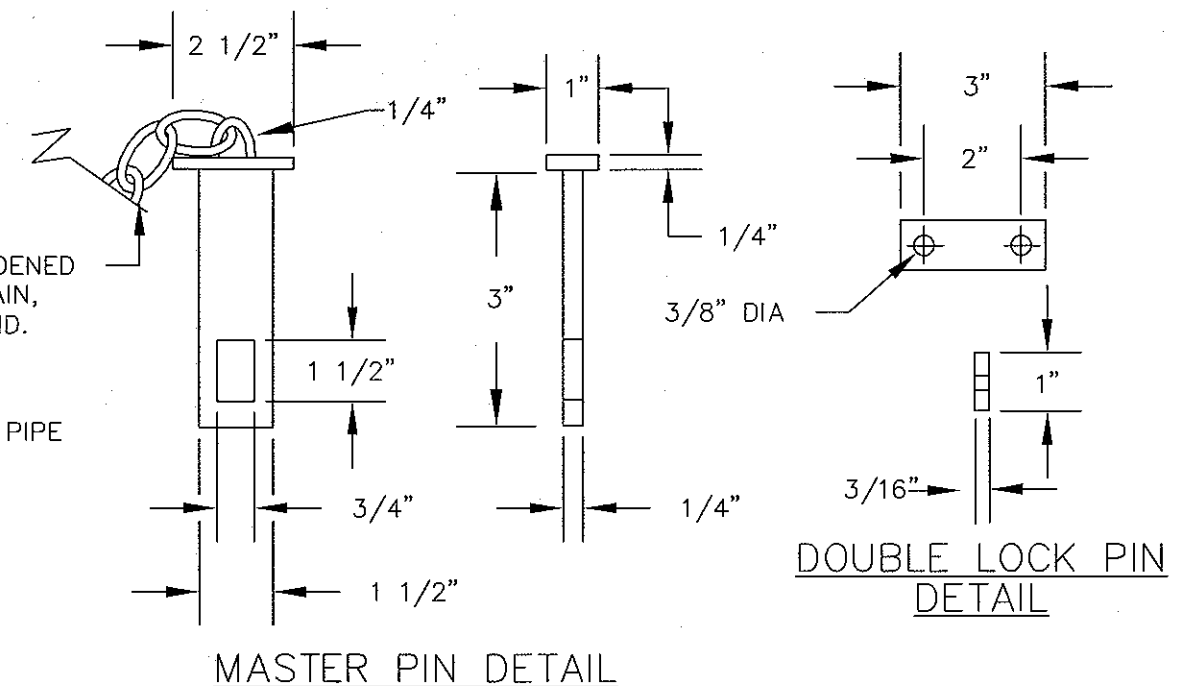
# GATE DETAIL TYPE II

## NOTES

1. EXTERIOR METAL EPOXY PAINT, COCOA BROWN UNLESS OTHERWISE APPROVED BY THE ENGINEER.
2. BARRICADE MARKERS SHALL MEET MUTCD REQUIREMENTS FOR TYPE 1 (FBM-L AND FBM-R). COLOR - RED & WHITE. 4 REQUIRED, 2 LEFT SIDE STRIPE, 2 RIGHT SIDE STRIPE.
3. OBJECT MARKERS SHALL MEET MUTCD REQUIREMENTS FOR TYPE 2. 6 REQUIRED, 2 ON EACH SIDE OF POSTS DESIGNATED.
4. ALL WELDS REQUIRED TO MANUFACTURE GATE, UNLESS OTHERWISE SHOWN, SHALL BE FILLET AND SHALL BE OF THE SAME SIZE AS THE THICKNESS OF THE SMALLER OF THE TWO PIECES BEING JOINED.
5. ALL MARKERS SHALL MEET MUTCD REQUIREMENTS FOR HIGH INTENSITY PRISMATIC RETROFLECTIVE SHEETING.



CASE HARDENED STOCK CHAIN, 3/8" ROUND.



WORK SUMMARY

SHEET

OF

10

10

ROAD 4347477R

STA	WORK ITEMS
00+00	JCT. 4347000 BEGIN ESTABLISHING CLEARING LIMITS BEGIN CLEARING & GRUBBING BEGIN CONSTRUCTING 12' ROADBED BEGIN RECONSTRUCTING DITCH RT
6+15	END RECONSTRUCTING DITCH RT
10+25	CONSTRUCT DD
21+35	RECONSTRUCT CATCH BASIN 18" CMP BEGIN CONSTRUCTING DITCH RT.
24+65	UNIT BOUNDARY #46
30+15	END CONSTRUCTING DITCH RT. EOP - PROPERTY BOUNDARY

ROAD 4347505R

STA	WORK ITEMS
00+00	JCT. 4347000 BEGIN ESTABLISHING CLEARING LIMITS BEGIN CLEARING AND GRUBBING INSTALL TYPE II GATE AS STAKED BY CO BEGIN CONSTRUCTING 12' ROADBED BEGIN CONSTRUCTING DITCH RT
3+75	END CONSTRUCTING DITCH RT
14+15	BEGIN CONSTRUCTING 4' CWR
14+95	END CONSTRUCTING 4' CWR
15+35	INSTALL NEW 18"x28' CMP
18+05	UNIT BOUNDARY #46
20+15	BEGIN CONSTRUCTING DITCH RT
21+70	BEGIN PLACING 6" AGGREGATE
22+00	END CONSTRUCTING DITCH RT
22+20	LIVE STREAM - ATP BEGIN CONSTRUCTING DITCH RT
22+70	END PLACING 6" AGGREGATE
23+60	END CONSTRUCTING DITCH RT
27+55	INSTALL NEW 18"x32' CMP CONSTRUCT NEW CATCH BASIN
44+10	BEGIN CONSTRUCTING 50' RADIUS CURVE WITH 4' CWL
47+15	END CONSTRUCTING 50' RADIUS CURVE WITH 4' CWL
72+00	BEGIN CONSTRUCTING 4' CWR
73+10	END CONSTRUCTING 4' CWR
78+40	JCT. 4347510 LT.
80+70	CONSTRUCT DD
104+50	INSTALL TYPE II GATE AS STAKED BY CO EOP

ROAD 4347510R

STA	WORK ITEMS
00+00	JCT. 4347505 BEGIN ESTABLISHING CLEARING LIMITS BEGIN CLEARING AND GRUBBING BEGIN CONSTRUCTING 12' ROADBED
4+00	INSTALL NEW 18"x32' CMP
8+75	CONSTRUCT DD
10+56	CONSTRUCT TAR - EOP

ROAD 4347580R

STA	WORK ITEMS
00+00	JCT. 4347000 BEGIN ESTABLISHING CLEARING LIMITS BEGIN CLEARING AND GRUBBING BEGIN CONSTRUCTING 12' ROADBED
3+45	BEGIN CONSTRUCTING DITCH RT. WITH LOD RT. 30'
3+95	END CONSTRUCTING DITCH RT.
8+50	CONSTRUCT DD
12+75	CONSTRUCT DD
13+70	BEGIN CONSTRUCTING DITCH RT.
16+85	END CONSTRUCTING DITCH RT. JCT. 4347585 LT.
17+75	BEGIN CONSTRUCTING DITCH LT. WITH LOD LT. 30'
20+25	CONSTRUCT DD - DO NOT INTERCEPT DITCH
23+05	END CONSTRUCTING DITCH LT.
30+95	CONSTRUCT DD - 14% STEEP GRADE DD
33+55	CONSTRUCT DD
42+24	EOP